WHAT IS CLAIMED IS:

1. A furnace probe positioning measuring system, comprising:

a positioning assembly configured to position proximate to a portion of a furnace;

a probe assembly moveably coupled to said positioning assembly, said probe assembly including a location sensing portion configured to adjust to a location of measurement within the furnace; and

a measurement device coupled to said location sensing portion, said measurement device indicating the location of said location sensing portion.

2. The system of Claim 1, wherein said probe assembly further comprises a translational member coupled between said location sensing portion and said positioning assembly.

3. The system of Claim 2, wherein said translational member and said sensing location portion are constrained to move together.

4. The system of Claim 3, wherein said translational member provides displacement of said location sensing portion in a linear direction.

5. The system of Claim 2, wherein said sensing location portion and said translational member are configured to form a substantially L-shape.

6. The system of Claim 1, wherein said location sensing portion is a rigid member with a predetermined configuration.

7. The system of Claim 1, wherein said location sensing portion is formed at least in part from a material having a coefficient of thermal expansion of at least a coefficient of thermal expansion of steel.

8. The system of Claim 1, wherein said location sensing portion is formed at least in part from a material selected from the group consisting of steel, steel alloys and molybdenum.

9. The system of Claim 1, wherein said location sensing portion extends a length of said probe assembly.

10. The system of Claim 1, wherein said location sensing portion has an adjustable length.

11. The system of Claim 1, wherein said positioning assembly further comprises:

a housing; and

a rotating/tilting member coupled to said housing such that said rotating/tilting member and said housing are constrained to move together by at least one movement of tilting and rotating.

12. The system of Claim 11, wherein said rotating/tilting member is adapted to couple to the furnace.

13. The system of Claim 11, wherein said rotating/tilting member is adapted to couple to a buckstay of the furnace or other rigid structure adjacent to the furnace.

14. The system of Claim 1, wherein said positioning assembly further comprises:

a housing capable of supporting said probe assembly; and

at least one adjustment support moveably supporting said probe assembly in at least one direction, said probe assembly adjustably supported by said at least one rotatable support.

15. The system of Claim 14, wherein said at least one adjustment support permits translational movement of said probe assembly, said at least one adjustment support being coupled to said housing.

16. The system of Claim 14, wherein said at least one adjustment support includes at least a pair of v-groove wheels.

17. The system of Claim 1, wherein said positioning assembly further comprises at least one stiffener configured to support said probe assembly and disposed against said probe assembly.

18. The system of Claim 1, wherein said positioning assembly further comprises a probe lock capable of minimizing movement of said probe assembly.

19. The system of Claim 1, wherein said at least one location sensing member includes a telescoping portion.

20. The system of Claim 2, wherein said translational member includes a telescoping portion.

21. A positioning measurement system, comprising:

a furnace;

a probe capable of being oriented at a position in a three-dimensional region, said probe including a location sensing portion;

at least one positioning assembly configured to vary said position of said probe, said at least one positioning assembly coupled between said furnace and said probe; and

a measurement device in communication with said probe, said measurement device capable of determining a position of said location sensing portion in said three-dimensional region.

22. The system of Claim 21, wherein said furnace further comprises:

a furnace surface;

at least one electrode configured to provide energy to said furnace;

an electrode block associated with said at least one electrode, said electrode block supported within said furnace surface, said at least one electrode supported in said electrode block; and

a wear surface formed on said electrode block proximate to said at least one electrode;

wherein said at least one adjustment member provides movement thereby adjusting the position of said probe to said wear surface.

23. The system of Claim 21, wherein said furnace is one of a top electrode furnace and a bottom electrode furnace.

24. The apparatus of Claim 21, wherein said probe includes a translational member coupled between said system location sensing portion and said positioning assembly, wherein said translational member provides linear displacement of said probe.

25. The system of Claim 24, wherein said translational member and said sensing location portion are constrained to move together.

26. The system of Claim 24, wherein said translational member provides displacement of said location sensing portion in a linear direction.

27. The system of Claim 24, wherein said sensing location portion and said translational member are configured to form a substantially L-shape.

28. The system of Claim 21, wherein said location sensing portion is a rigid member with a predetermined configuration.

29. The system of Claim 21, wherein said location sensing portion is formed at least in part from a material having a thermal expansion coefficient of at least a steel thermal expansion coefficient.

30. The system of Claim 21, wherein said location sensing portion is formed at least in part from a material selected from the group consisting of steel, steel alloys and molybdenum.

31. The system of Claim 21, wherein said location sensing portion extends a length of said probe assembly.

32. The system of Claim 21, wherein said location sensing portion is an adjustable length.

33. The system of Claim 21, wherein said at least one positioning assembly further comprises:

a housing; and

a rotating/tilting member coupled to said housing such that said rotating/tilting member and said housing are constrained to move together by at least one movement of tilting and rotating.

34. The system of Claim 33, wherein said rotating/tilting member is configured to couple to said furnace.

35. The system of Claim 33, wherein said rotating/tilting member is configured to couple to a buckstay of said furnace or other rigid structure adjacent to the furnace.

36. The system of Claim 21, wherein said at least one positioning assembly further comprises:

a housing capable of supporting said probe; and

at least one adjustment support moveably supporting said probe in at least one direction, said probe being adjustably supported by an at least one rotatable support.

37. The system of Claim 36, wherein said at least one rotatable support is configured to permit translational movement of said probe, and said at least one rotatable support being coupled to said housing.

38. The system of Claim 36, wherein said at least one rotatable support includes at least a pair of v-groove wheels.

39. The system of Claim 21, wherein said at least one positioning assembly further comprises at least one stiffener configured to support said probe and disposed against said probe.

40. The system of Claim 21, wherein said at least one positioning assembly further comprises a probe lock capable of minimizing movement of said probe.

41. The system of Claim 21, wherein said at least one location sensing portion includes a telescoping portion.

42. The system of Claim 21, wherein said at least one location sensing portion is interchangeable.

43. An electrode block erosion measuring method, comprising the steps of:

inserting a position measuring probe into a furnace;

obtaining a first position measurement and a second position measurement within said furnace; and

comparing the first position measurement and the second position measurement to determine a difference between the first position measurement and the second position measurement, wherein the difference is indicative of erosion associated with an electrode block.

44. The method of Claim 43, wherein the first measurement is taken at a furnace floor position located adjacent to the electrode block.

45. The method of Claim 43, wherein the second measurement is taken at the electrode block located proximate to an electrode supported within the electrode block.

46. The method of Claim 43, wherein the first position measurement and the second position measurement are predetermined positions within the furnace.

47. The method of Claim 43, wherein the first position measurement is determined based on an electrode position.

48. The method of Claim 43, wherein the second measurement is taken at the electrode block located at about 6 inches from a centerline of an electrode.

49. The method of Claim 43, wherein the step of inserting is accomplished through a charging door of the furnace.

50. The method of Claim 43, wherein the step of obtaining the first position measurement and the second position measurement is accomplished in at most about 45 seconds.

51. The method of Claim 43, further comprising the step of terminating batch charging of the furnace while performing the step of obtaining the first measurement and the second measurement.

52. The method of Claim 43, wherein the position measuring probe includes a first portion and a second portion which are sized and shaped such that the first portion and the second portion move through an opening into the furnace.

53. The method of Claim 52, wherein the first portion is rotated such that the second portion is moved from a first position to a second position.

54. The method of Claim 43, wherein the position measuring probe is a substantially L-shaped configuration.

55. A furnace probe positioning measuring system, comprising:

means for positioning proximate to a portion of a furnace;

means for probing locations within furnace, said means for probing moveably coupled to said means for positioning and including a location sensing portion configured to adjust to a location of measurement within the furnace; and

means for measuring the location of measurement, said means for measuring coupled to said location sensing portion.

56. The system of Claim 55, wherein said means for measuring further comprises a translational member coupled between said location sensing portion and said means for positioning.

57. The system of Claim 56, wherein said translational member and said location sensing portion are constrained to move together.

58. The system of Claim 57, wherein said translational member provides displacement of said location sensing portion in a linear direction.

59. The system of Claim 56, wherein said location sensing portion and said translational member are configured to form a substantially L-shape.

60. The system of Claim 55, wherein said location sensing portion is a rigid member with a predetermined configuration.

61. The system of Claim 55, wherein said location sensing portion is formed at least in part from a material having a coefficient of thermal expansion of at least a coefficient of thermal expansion of steel.

62. The system of Claim 55, wherein said location sensing portion is formed at least in part from a material selected from the group consisting of steel, steel alloys and molybdenum.

63. The system of Claim 55, wherein said location sensing portion extends a length of said probe assembly.

64. The system of Claim 55, wherein said location sensing portion has an adjustable length.

65. The system of Claim 55, wherein said means for positioning further comprises:

a housing configured to further including; and

a rotating/tilting member coupled to said housing such that said rotating/tilting member and said housing are constrained to move together by at least one movement of tilting and rotating.

66. The system of Claim 65, wherein said rotating/tilting member is adapted to couple to the furnace.

67. The system of Claim 65, wherein said rotating/tilting member is adapted to couple to a buckstay of the furnace or other rigid structure adjacent to the furnace.

68. The system of Claim 55, wherein said means for positioning further comprises:

at least one adjustment support moveably supporting said means for probing in at least one direction.

69. The system of Claim 68, wherein said at least one adjustment support permits translational movement of said means for probing, said at least one adjustment support being coupled to said housing.

70. The system of Claim 68, wherein said at least one adjustment support includes at least a pair of v-groove wheels.

71. The system of Claim 55, wherein said means for positioning further comprises at least one stiffener configured to support said probe assembly and disposed against said probe assembly.

72. The system of Claim 55, wherein said means for positioning further comprises a probe lock capable of minimizing movement of said means for probing.

73. The system of Claim 55, wherein said at least one location sensing portion includes a telescoping portion.

74. The system of Claim 56, wherein said translational member includes a telescoping portion.